

CLAIM SET AS AMENDED

1. (Currently Amended) A back light unit in a liquid crystal display including a lamp generating a light, and a light input having a lamp housing for housing the lamp and reflecting the light, said unit comprising:

a light-guide plate including a cone pattern to uniformly guide the light from the light input;

a light-path converter to control a progress direction of the light in such a manner that the light outputted from the light-guide plate is progressed in a direction perpendicular to a liquid crystal panel; and

a diffusion sheet for diffusing the light passing through the light-path converter into the liquid crystal panel,

wherein the cone pattern is formed on an upper surface of the light-guide plate, **and a density of cones increases as a distance from said lamp increases.**

2.(Cancelled)

3.(Currently Amended) The back light unit according to ~~claim 2~~, **claim 1**, wherein a vertical angle of a cone of the cone pattern ranges from about 30° to about 120°.

4. (Currently Amended) The back light unit according to ~~claim 2~~, claim 1, wherein a diameter of a cone of the cone pattern ranges from about 100 to about 500  $\mu\text{m}$  and a height ranges from about 50 to about 900  $\mu\text{m}$ .

5.(Currently Amended) The back light unit according to claim 1, wherein spacings of cones of the ~~cone~~ cone pattern is controlled to correspond to a distribution of the light.

6.(Original) The back light unit according to claim 1, wherein the light converter is a forward prism sheet having a vertical angle ranging from about  $90^\circ$  to about  $130^\circ$ .

7.(Original) The back light unit according to claim 1, wherein the light converter is a backward prism sheet having a desired between angle.

8.(Original) The back light unit according to claims 7, wherein a vertical angle of the backward prism is above about  $100^\circ$ .

9.(Original) The back light unit according to claim 1, wherein the light-path converter is a hologram sheet.

10.(Original) The back light unit according to claim 9, wherein a space and a shape of the hologram pattern are controlled to correspond to an output angle of the light progressing into the liquid crystal panel.

11. (Currently Amended) A back light unit for a liquid crystal display, comprising:

a lamp in a lamp housing;

a light-guide plate aside said lamp and said lamp housing, said light-guide plate including cones distributed in a pattern;

a reflective plate placed below said light-guide plate; and

a diffusion sheet disposed above said light-guide plate,

wherein said cones are formed on an upper surface of said light-guide plate,  
**and a density of cones increases as a distance from said lamp increases.**

12.(Original) The back light unit of claim 11, further comprising:

a light-path converter placed above said light-guide plate.

13.(Original) The back light unit of claim 12, wherein said light-path converter is one of a forward prism sheet, a backward prism sheet, and a hologram sheet.

14.(Original) The back light unit of claim 13, wherein said forward prism sheet has a prism with vertical angle ranging from about 90° to about 130°.

15.(Original) The back light unit of claim 13, wherein said backward prism sheet has a prism with a between angle of within 45°.

16.(Original) The back light unit of claim 13, wherein said backward prism sheet has a prism with a vertical angle of above about 100°.

17.(Currently Amended) The back light unit of claim 13, wherein said hologram sheet has a pattern and a shape that are controlled to correspond to an output angle of light exiting from said light-guide **plate**.

18.(Cancelled)

19.(Currently Amended) The back light unit of claim 11, wherein a density of said cones are such that said light exiting from said light-guide **plate** is uniformly distributed.

20.(Cancelled)

21.(Currently Amended) The back light unit of claim 19, wherein said cones are more densely populated around partially dark areas of said light-guide **plate**.